EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	(message adj authentication adj code mac) with (deriv$3 generat$3 based part) with (key bit) with angle	USPAT	OR	ON	2007/11/25 23:19
L2	25	(message adj authentication adj code mac) with angle	USPAT	OR	ON	2007/11/25 23:07
L3	41	(message adj authentication adj code mac) same (quantum optical adj channel)	USPAT	OR	ON	2007/11/25 23:08
L4	82	(message adj authentication adj code mac) same (quantum optical adj channel)	US-PGPUB; USPAT	OR	ON	2007/11/25 23:12
L5	5	(message adj authentication adj code mac) same (quantum adj cryptography)	US-PGPUB; USPAT	OR	ON	2007/11/25 23:12
L6	0	(message adj authentication adj code mac) and (quantum adj (encrypt$3 cryptography)).ab.	US-PGPUB; USPAT	OR	ON	2007/11/25 23:13
L7	22	(message adj authentication adj code mac) and (quantum adj (encrypt$3 cryptography))	US-PGPUB; USPAT	OR	ON	2007/11/25 23:16
L8	0	((message adj authentication adj code mac) and (optical adj pulse) and (quantum adj (encrypt$3 cryptography))).clm.	US-PGPUB; USPAT	OR	ON	2007/11/25 23:16
L9	0	((message adj authentication adj code mac) and ((optical adj pulse) and (quantum adj (encrypt$3 cryptography)))).clm.	US-PGPUB; USPAT	OR	ON	2007/11/25 23:17
L10	0	((message adj authentication adj code mac) and ((optical adj pulse) (quantum adj (encrypt$3 cryptography)))).clm.	US-PGPUB; USPAT	OR	ON	2007/11/25 23:17
L12	12	((message adj authentication adj code mac) and ((modulat$3 near4 (optical)) (quantum adj (encrypt$3 cryptography)))).clm.	US-PGPUB; USPAT	OR	ON	2007/11/25 23:19
L13	16	((message adj authentication adj code mac) and ((modulat$3 with (optical)) (quantum adj (encrypt$3 cryptography)))).clm.	US-PGPUB; USPAT	OR	ON	2007/11/25 23:19
L14	0	(message adj authentication adj code mac) and (phase adj modulation) and quantum adj encryption	USPAT	OR	ON	2007/11/25 23:51
L15	125	(380/263).CCLS.	US-PGPUB; USPAT	OR	OFF	2007/11/25 23:52

EAST Search History

L16	12	15 and (@pd > "20070720")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/11/25 23:52
S1	113	(380/263).CCLS.	US-PGPUB; USPAT	OR	OFF	2007/07/20 16:08
S3	13	quantum adj encryption and optical adj pulses	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 17:03
S4	13	quantum adj encryption and optical adj pulse	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/23 14:28
S5	117465	"1" and (authenticat$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 16:08
S6	113	(380/263).CCLS.	US-PGPUB; USPAT	OR	OFF	2007/07/20 16:08
S7	34	S6 and (authenticat$3)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 16:12
S8	9	S6 and (authenticat$3) and quantum	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 16:12
S9	11	quantum adj encryption and phase adj modulation	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 21:06
S10	1	("6778669").PN.	US-PGPUB; USPAT	OR	OFF	2007/07/20 17:10

EAST Search History

S11	5503	polarization and phase adj modulation	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 17:21
S12	372	(polarization same phase adj modulation) and quantum	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 17:26
S13	2	(polarization same phase adj modulation) and quantum adj encryption	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/21 18:59
S14	11	(phase adj modulation) and quantum adj encryption	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 17:29
S15	11	quantum adj encrypt$3 and (horizontal with vertical)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 17:34
S16	329	polarization adj rotator and quantum	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 17:34
S17	2	polarization adj rotator and quantum adj encrypt$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 17:37
S18	6	rotator and quantum adj encrypt$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 17:38

EAST Search History

S19	7	rotat$3 with angle and quantum adj encrypt$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 21:03
S20	0	mach adj zehnder adj interferomeeter	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 21:03
S21	398	lithium adj niobate adj modulator	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 21:04
S23	1	lithium adj niobate adj modulator and quantum adj encrypt$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 21:04
S24	23	quantum adj encryption and phase adj modulat$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 21:06
S25	0	quantum adj encrypt$3 and message adj authentication adj code	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/21 15:20
S26	99	message adj authentication adj code near4 (generate derive) near4 key	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/20 22:55
S27	25	(optic$3) near4 encrypt$3 and message adj authentication adj code	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/21 16:47

EAST Search History

S28	14	(optic$ qubit) same message adj authentication adj code	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/21 16:52
S29	0	(message adj authentication adj code mac) with authenticate near4 channel	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/21 16:52
S30	0	(message adj authentication adj code mac) with authenticating near4 channel	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/21 16:52
S31	924	(message adj authentication adj code mac) with signature	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/21 16:56
S32	667	(message adj authentication adj code mac) with signature same authenticat$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/21 16:56
S33	649	(message adj authentication adj code mac) with signature same authenticat$3	US-PGPUB; USPAT	OR	ON	2007/07/21 16:57
S34	197	(message adj authentication adj code mac) with signature same authenticat$3	USPAT	OR	ON	2007/07/21 16:58
S35	47	(message adj authentication adj code mac) with password same authenticat$3	USPAT	OR	ON	2007/11/25 22:58
S36	37	bb84 same phase	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/21 19:00

EAST Search History

S37	16	bb84 same phase same polarization	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/21 19:00
S38	16	bb84 same phase same (polariz$2 polarization)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/07/21 19:00
S39	0	("9779440").PN.	US-PGPUB; USPAT	OR	OFF	2007/07/23 14:29
S40	1	("6157947").PN.	US-PGPUB; USPAT	OR	OFF	2007/07/23 14:29

Terms used: **quantum optical encryption** Found **17** of **215,186**

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1 Special section on impact of quantum technologies on networks and networking research: Quantum-noise: protected data encryption for WDM fiber-optic networks
Eric Corndorf, Chuang Liang, Gregory S. Kanter, Prem Kumar, Horace P. Yuen
October 2004 **ACM SIGCOMM Computer Communication Review**, Volume 34 Issue 5
Publisher: ACM Press
Full text available: pdf(696.74 KB) Additional Information: full citation, abstract, references, index terms

We demonstrate high data-rate quantum-noise{protected data encryption through optical fibers using coherent states of light. Specifically, we demonstrate 650Mbps data encryption through a 10Gbps data-bearing, in-line amplified 200km-long line. In our protocol, legitimate users (who share a short secret-key) communicate using an M-ry signal set while an attacker (who does not share the secret-key) is forced to contend with the fundamental and irreducible quantum-measurement noise of coherent stat ...

Keywords: data encryption, quantum cryptography

2 Miscellany: Quantum cryptography in practice
Chip Elliott, David Pearson, Gregory Troxel
August 2003 **Proceedings of the 2003 conference on Applications, technologies, architectures, and protocols for computer communications SIGCOMM '03**
Publisher: ACM Press
Full text available: pdf(809.93 KB) Additional Information: full citation, abstract, references, citings, index terms

BBN, Harvard, and Boston University are building the DARPA Quantum Network, the world's first network that delivers end-to-end network security via high-speed Quantum Key Distribution, and testing that Network against sophisticated eavesdropping attacks. The first network link has been up and steadily operational in our laboratory since December 2002. It provides a Virtual Private Network between private enclaves, with user traffic protected by a weak-coherent implementation of quantum cryptogra ...

Keywords: IPsec, cryptographic protocols, error correction, key agreement protocols, privacy amplification, quantum cryptography, quantum key distribution, secure networks

3 Quantum "encryption" (student paper panel)
Mark V. Hurwitz

April 2000 **Proceedings of the tenth conference on Computers, freedom and privacy: challenging the assumptions CFP '00**
Publisher: ACM Press
Full text available: pdf(107.79 KB) Additional Information: full citation, references, index terms

4 An introduction to quantum computing for non-physicists
September 2000 **ACM Computing Surveys (CSUR)**, Volume 32 Issue 3
Publisher: ACM Press
Full text available: pdf(491.89 KB) Additional Information: full citation, abstract, references, citings, index terms, review

Richard Feynman's observation that certain quantum mechanical effects cannot be simulated efficiently on a computer led to speculation that computation in general could be done more efficiently if it used these quantum effects. This speculation proved justified when Peter Shor described a polynomial time quantum algorithm for factoring intergers.In quantum systems, the computational space increases exponentially with the size of the system, which enables exponential parallelism. ...

Keywords: complexity, parallelism, quantum computing

5 Special section on impact of quantum technologies on networks and networking research: Quantum networks: from quantum cryptography to quantum architecture
Tatjana Curcic, Mark E. Filipkowski, Almadena Chtchelkanova, Philip A. D'Ambrosio, Stuart A. Wolf, Michael Foster, Douglas Cochran
October 2004 **ACM SIGCOMM Computer Communication Review**, Volume 34 Issue 5
Publisher: ACM Press
Full text available: pdf(221.26 KB) Additional Information: full citation, abstract, references

As classical information technology approaches limits of size and functionality, practitioners are searching for new paradigms for the distribution and processing of information. Our goal in this Introduction is to provide a broad view of the beginning of a new era in information technology, an era of quantum information, where previously underutilized quantum effects, such as quantum superposition and entanglement, are employed as resources for information encoding and processing. The ability t ...

6 Architectural implications of quantum computing technologies
Rodney Van Meter, Mark Oskin
January 2006 **ACM Journal on Emerging Technologies in Computing Systems (JETC)**, Volume 2 Issue 1
Publisher: ACM Press
Full text available: pdf(3.24 MB) Additional Information: full citation, abstract, references, index terms

In this article we present a classification scheme for quantum computing technologies that is based on the characteristics most relevant to computer systems architecture. The engineering trade-offs of execution speed, decoherence of the quantum states, and size of systems are described. Concurrency, storage capacity, and interconnection network topology influence algorithmic efficiency, while quantum error correction and necessary quantum state measurement are the ultimate drivers of logical clo ...

Keywords: Quantum computing, quantum computer architecture

7 An introduction to quantum cryptography
Nick Papanikolaou

May 2005 **Crossroads**, Volume 11 Issue 3
Publisher: ACM Press
Full text available: html(40.57 KB) Additional Information: full citation, references, index terms

8 Quantum cryptography: A survey
Dagmar Bruss, Gábor Erdélyi, Tim Meyer, Tobias Riege, Jörg Rothe
July 2007 **ACM Computing Surveys (CSUR)**, Volume 39 Issue 2
Publisher: ACM Press
Full text available: pdf(335.26 KB) Additional Information: full citation, abstract, references, index terms

We survey some results in quantum cryptography. After a brief introduction to classical cryptography, we provide the quantum-mechanical background needed to present some fundamental protocols from quantum cryptography. In particular, we review quantum key distribution via the BB84 protocol and its security proof, as well as the related quantum bit commitment protocol and its proof of insecurity.

Keywords: Quantum bit commitment, quantum cryptography, quantum key distribution

9 Cryptology Column: The Book I've Always Wanted To Write (Almost)
Gilles Brassard
June 1995 **ACM SIGACT News**, Volume 26 Issue 2
Publisher: ACM Press
Full text available: pdf(211.09 KB) Additional Information: full citation

10 Routing: Secure routerless routing
Vince Grolmusz, Zoltán Király
August 2004 **Proceedings of the ACM SIGCOMM workshop on Future directions in network architecture FDNA '04**
Publisher: ACM Press
Full text available: pdf(171.68 KB) Additional Information: full citation, abstract, references, index terms

Suppose that there are *n* Senders and *r* Receivers. Our goal is to design a communication network such that long messages can be sent from Sender *i* to Receiver π(*i*) such that no other receiver can retrieve the message intended for Receiver π(*i*). The task can easily be completed using some classical interconnection network and routers in the network. Alternatively, if every Receiver is directly connected to all n Senders, then the Senders can choose wh ...

Keywords: high speed optical networks, routerless routing, secure network protocols

11 Perfect cryptographic security from partially independent channels
Ueli M. Maurer
January 1991 **Proceedings of the twenty-third annual ACM symposium on Theory of computing STOC '91**
Publisher: ACM Press
Full text available: pdf(1.06 MB) Additional Information: full citation, references, citings, index terms

12 ACM Forum: letters

March 1976 **Communications of the ACM**, Volume 19 Issue 3

Publisher: ACM Press

Full text available: pdf(534.00 KB) Additional Information: full citation, references

13 Teaching context in information security

Matt Bishop

September 2006 **Journal on Educational Resources in Computing (JERIC)**, Volume 6 Issue 3

Publisher: ACM Press

Full text available: pdf(120.65 KB) Additional Information: full citation, abstract, references, index terms

This article investigates teaching the application of technical ideas by non-technical means, especially by using puzzles to engage students. After discussing the need to teach students to evaluate contexts in which decisions about computer security must be made, we suggest questions and scenarios drawn from political science, history, as well as other humanities, to force students to apply or derive principles of computer security in unusual and unexpected situations. Our experience shows th ...

Keywords: Environment, computer security, instruction, judgment

14 Design and performance evaluation of a full-duplex operating receiver for time-hopping UWB

Tomaso Erseghe, Nicola Laurenti

August 2006 **Mobile Networks and Applications**, Volume 11 Issue 4

Publisher: Kluwer Academic Publishers

Full text available: pdf(986.33 KB) Additional Information: full citation, abstract, references, index terms

One of the most attractive features of time-hopping ultra-wide-band (UWB) transmission, largely ignored in the literature so far, is the possibility to operate in full-duplex mode, thanks to its very low duty-cycle. This allows a terminal to transmit and receive within the same time frame and frequency band, yielding a considerable saving of time and band resources at the radio-resource-management layer. In this paper, we propose a methodology to design channel estimation/synchronization and dem ...

Keywords: asynchronous networks, full duplex communications, multipath channel estimation, time hopping communications, ultra wide band communications

15 Document based architecture & applications: UpLib: a universal personal digital library system

William C. Janssen, Kris Popat

November 2003 **Proceedings of the 2003 ACM symposium on Document engineering DocEng '03**

Publisher: ACM Press

Full text available: pdf(261.28 KB) Additional Information: full citation, abstract, references, citings, index terms

We describe the design and use of a personal digital library system, UpLib. The system consists of a full-text indexed repository accessed through an active agent via a Web interface. It is suitable for personal collections comprising tens of thousands of documents (including papers, books, photos, receipts, email, etc.), and provides for ease of document entry and access as well as high levels of security and privacy. Unlike many other systems of the sort, user access to the document collection ...

Keywords: document management, document repository, page image, personal digital library, thumbnail interfaces, web interfaces

16 Linux Clusters at NIST

Wayne J. Salamon, Alan Mink
June 1999 **Linux Journal**

Publisher: Specialized Systems Consultants, Inc.

Full text available: html(19.49 KB) Additional Information: full citation, abstract, references, index terms

NIST is using Linux clusters for research, benchmarking them against super computers

17 GPGPU: general purpose computation on graphics hardware

David Luebke, Mark Harris, Jens Krüger, Tim Purcell, Naga Govindaraju, Ian Buck, Cliff Woolley, Aaron Lefohn
August 2004 **ACM SIGGRAPH 2004 Course Notes SIGGRAPH '04**

Publisher: ACM Press

Full text available: pdf(63.03 MB) Additional Information: full citation, abstract, citings

The graphics processor (GPU) on today's commodity video cards has evolved into an extremely powerful and flexible processor. The latest graphics architectures provide tremendous memory bandwidth and computational horsepower, with fully programmable vertex and pixel processing units that support vector operations up to full IEEE floating point precision. High level languages have emerged for graphics hardware, making this computational power accessible. Architecturally, GPUs are highly parallel s ...

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